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material and combinations thereof; and
a flowfield[s] formed in the porous, electrically conducting member.

7. (Three Times Amended) A bipolar plate for electrochemical cells, comprising:

a porous, electrically conducting sheet selected from the group consisting of expanded metal mesh, metal foam, conducting polymer foam, porous conductive carbon material and combinations thereof;

a gas impermeable material disposed within a minor portion of the sheet to form a gas barrier; and

a flowfield[s] formed in the [porous, electrically conducting member] sheet.

Please enter the following new claims:

42. The bipolar plate of claim 7, wherein the flowfield is a gas flowfield.—

43. The bipolar plate of claim 7, wherein the flowfield is a liquid flowfield.—

44. A bipolar plate for electrochemical cells, comprising:

a porous, electrically conducting sheet selected from the group consisting of expanded metal mesh, metal foam, conducting polymer foam, porous conductive carbon material and combinations thereof; and

a gas impermeable material disposed within a first portion of the sheet to form a gas barrier leaving a second portion of the sheet to serve as a flowfield.